

# ISH<sup>®</sup> (Vertical Type)

耐高温・耐振動性に優れた垂直嵌合SMTコネクタ

Product Specifications:		Single-row	Double-row
Pitch (mm max.)		2.0	
Contact Size (mm)		0.5 × 0.4(020)	
Mated Height (mm max.)		(ISH)20.75, (ISHV)19.95	
Width formula (mm)		(ISH)7.6+1.0*?pin, (ISHV)10.5+1.0*?pin	
Operating Temperature		-40 - 125°C	
Vibration Resistance		10G	
Current Rating		4.5A per pin	
Voltage Rating		100V	
Withstand Voltage		AC 1000V/minute	
Plating		Sn	
Housing		Male:glass-filled LCP, Female:PBT	
Pin counts	Range	Up to 20	Up to 40
	Available	-	8*, 10, 20, 26

#### Applicable Cable Size:

AWG#22,#20  
\*Insulation Diameter 1.6 mm max.

#### Applicable Standards (Reference Only):

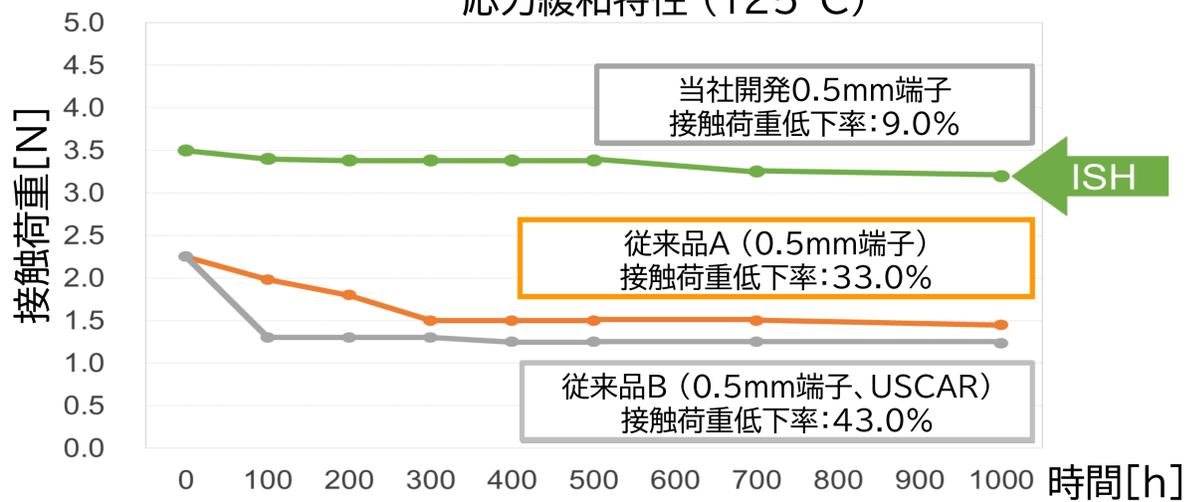
LV214 : 8P (optional)

\*記載のない極数の対応状況についてはお問い合わせください。  
\*ISH V シリーズ対応:8P



## ▶ 高い接触信頼性を求める機器に最適な優れた耐高温性・耐振動性

応力緩和特性 (125°C)



## ▶ 独自のバネ構造端子による高い長期接触信頼性



## ▶ LV214規格準拠、高温・振動環境の産業用途等に最適

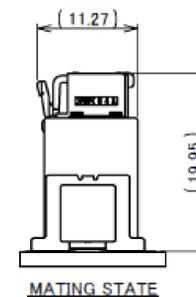
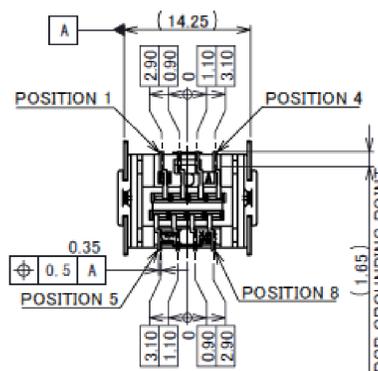
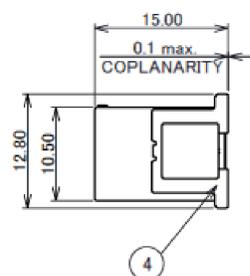
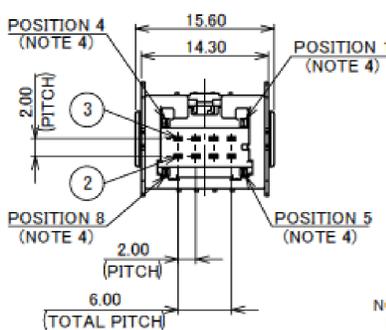
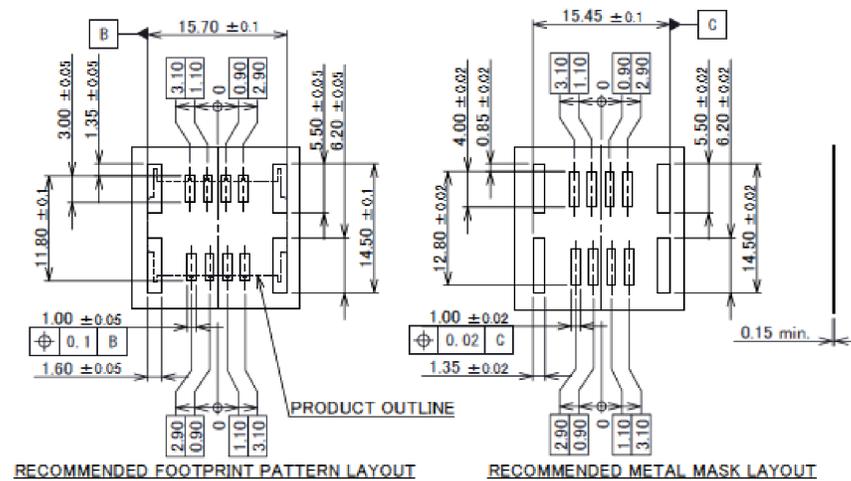
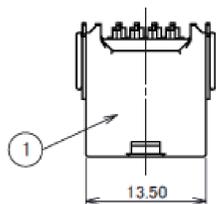


- ヘッドライト
- インバータ & DC/DC コンバータ
- バッテリーコントロールモジュール
- リアカメラモジュール
- 車載インフォテインメント
- ロボット部品
- 工場自動化装置

# Component Parts Details

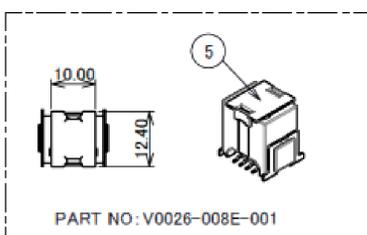
## ISH® (Vertical Type) MALE (8P) ※ISHV:

MALE CONNECTOR	
PART NO.	VACUUM CAP
V0026-008E-001	WITH
◆V0026-008E-002	WITHOUT
◆MARK MEANS NOT AVAILABLE.	



- NOTES
1. APPLICABLE PART NO.:
    - FEMALE HOUSING...V0027-91008-211
    - FEMALE RETAINER...V0116-92008-01
    - FEMALE TERMINAL...VT009-02
  2. COMPLY WITH ELV/RoHS
  3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
  4. POSITION NUMBERS ARE INDICATED.

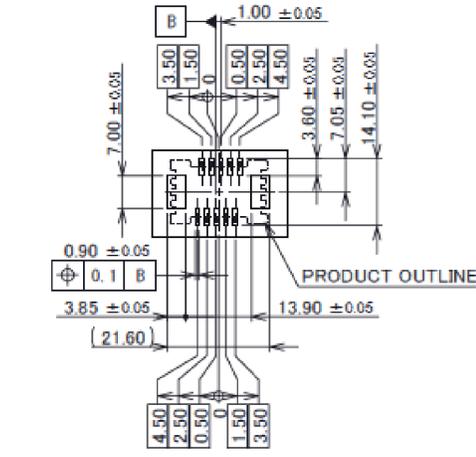
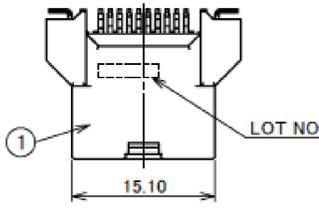
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	S <sub>n</sub> REFLOW
3	MALE TERMINAL-2	BRASS	S <sub>n</sub> REFLOW
2	MALE TERMINAL-1	BRASS	S <sub>n</sub> REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0



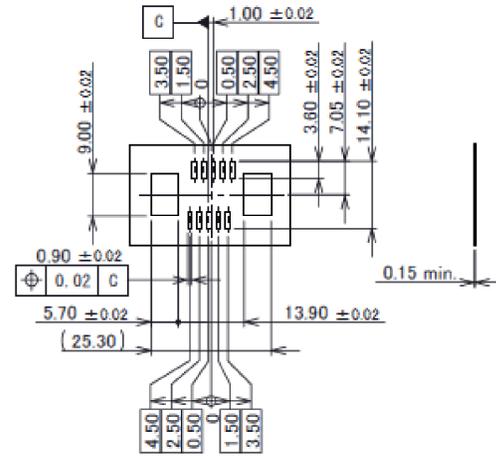
# ISH® (Vertical Type) MALE (10P):

PART NO.	VACUUM CAP
V0019-010E-001	WITH
◆V0019-010E-002	WITHOUT

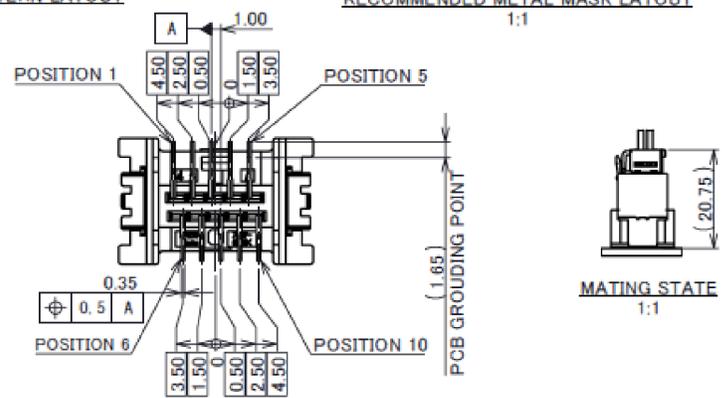
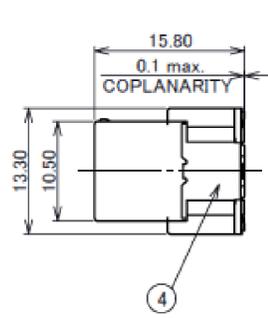
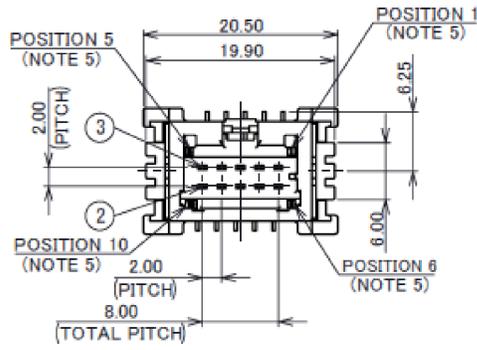
◆MARK MEANS NOT AVAILABLE



RECOMMENDED FOOTPRINT PATTERN LAYOUT 1:1



RECOMMENDED METAL MASK LAYOUT 1:1

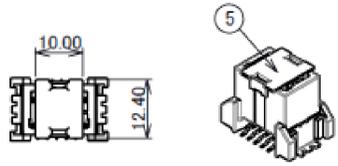


MATING STATE 1:1

### NOTES

- APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91010-211
  - FEMALE RETAINER...V0020-92010-211
  - FEMALE TERMINAL...VT009-02
- COMPLY WITH ELV/RoHS
- HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL(HDM-0020)
- USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VAGUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK / UL94V-0

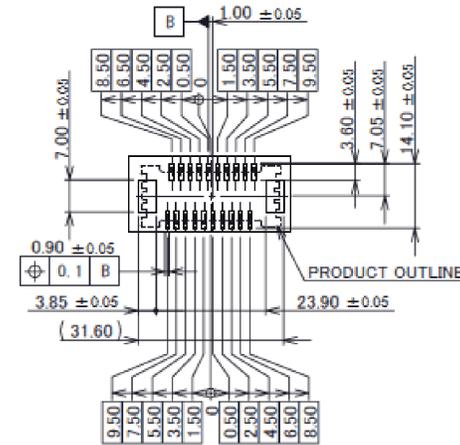
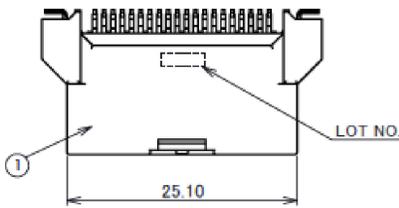


PART NO: V0019-010E-001

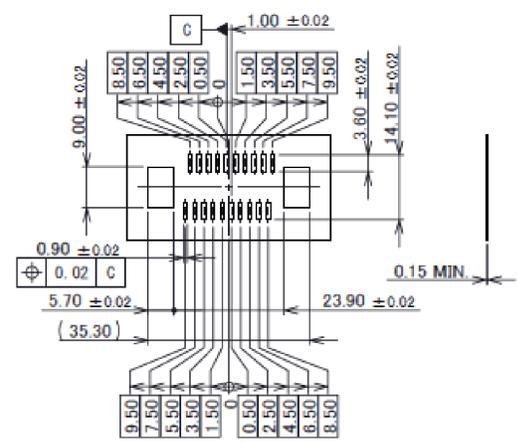
Rev.0

# ISH® (Vertical Type) MALE (20P):

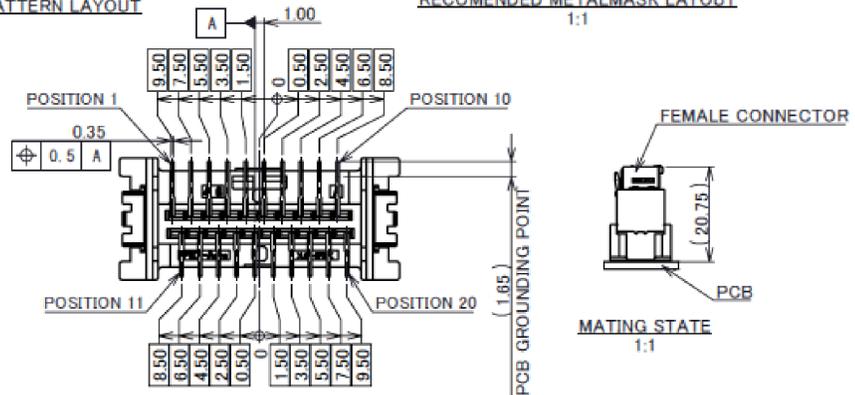
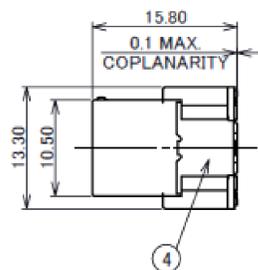
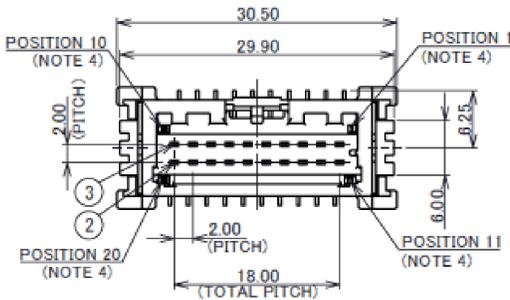
PART NO.
V0019-020E-001
V0019-020E-002



RECOMENDED FOOTPRINT PATTERN LAYOUT 1:1



RECOMMENDED METALMASK LAYOUT 1:1

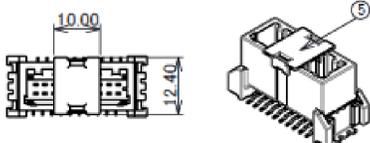


MATING STATE 1:1

### NOTES

- APPLICABLE PART NO.:
  - FEMALE HOUSING...V0020-91020-211
  - FEMALE RETAINER...V0020-92020-211
  - FEMALE TERMINAL...VT009-02
- COMPLY WITH ELV/RoHS
- USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
- POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK/UL94V-0



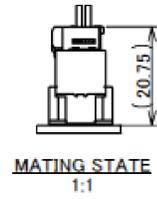
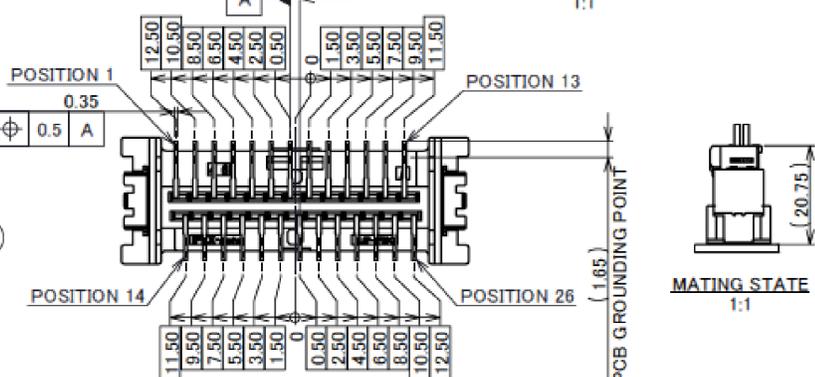
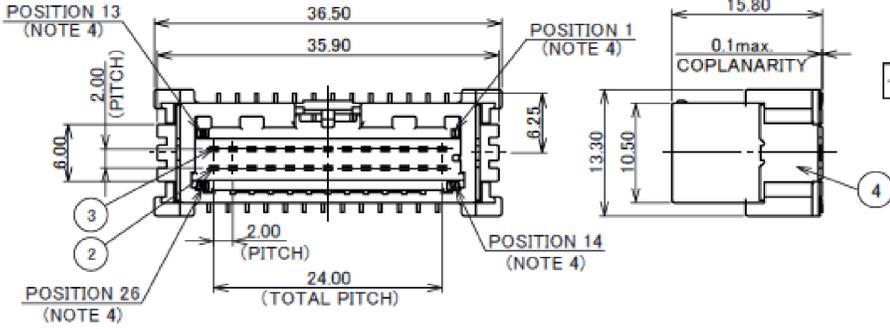
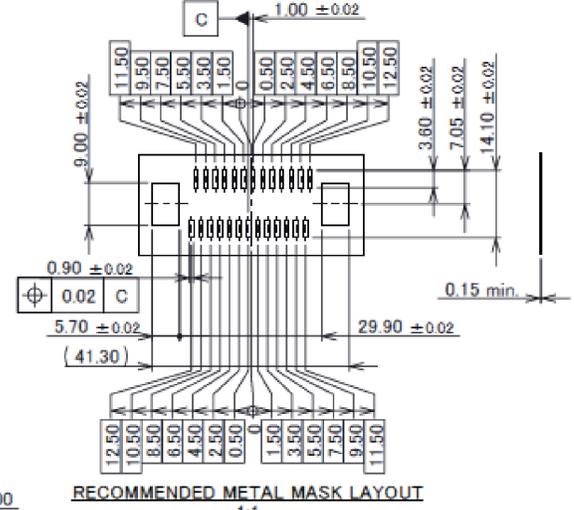
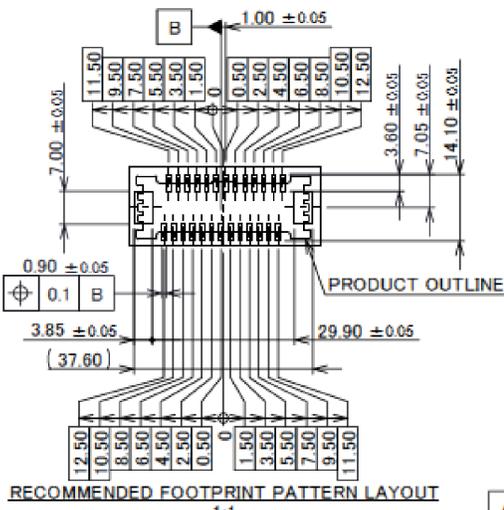
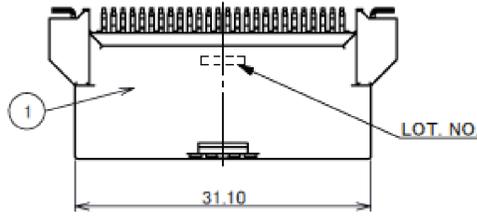
PART NO:V0019-020E-001

Rev.0

# ISH® (Vertical Type) MALE (26P):

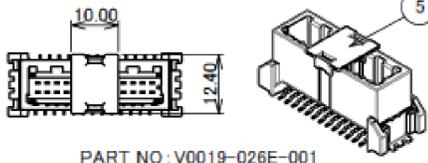
PART NO.	VACUUM CAP
◆V0019-026E-001	WITH
V0019-026E-002	WITHOUT

◆MARK MEANS NOT AVAILABLE.



- NOTES
1. APPLICABLE PART NO.:
    - FEMALE HOUSING --- V0020-91026-211
    - FEMALE RETAINER --- V0020-92026-211
    - FEMALE TERMINAL --- VT009-02
  2. COMPLY WITH ELV/RoHS
  3. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
  4. POSITION NUMBERS ARE INDICATED.

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
5	VACUUM CAP	GLASS-FILLED LCP	NATURAL
4	HOLD DOWN	BRASS	Sn REFLOW
3	MALE TERMINAL-2	BRASS	Sn REFLOW
2	MALE TERMINAL -1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK

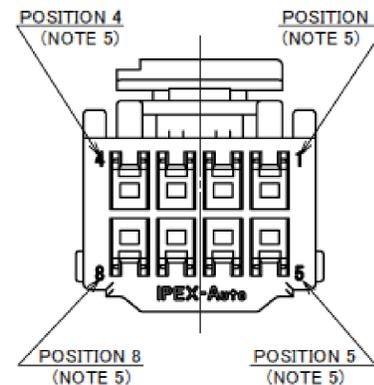
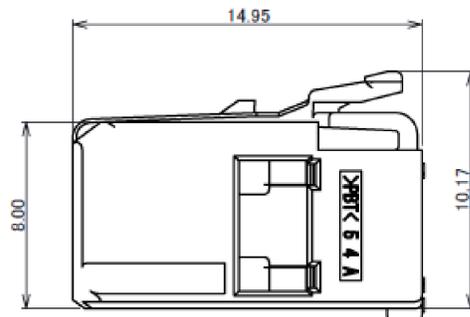
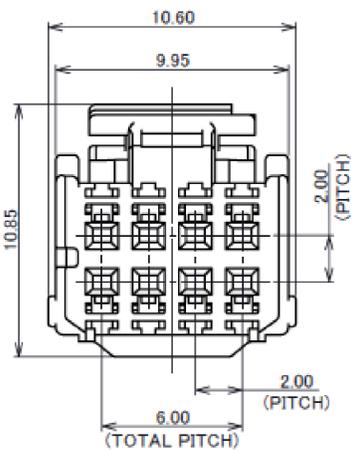
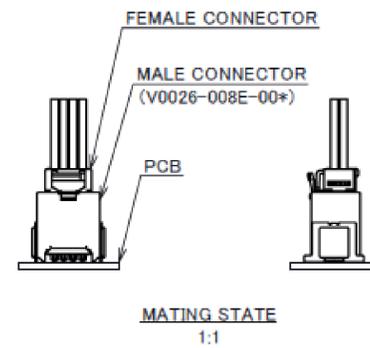
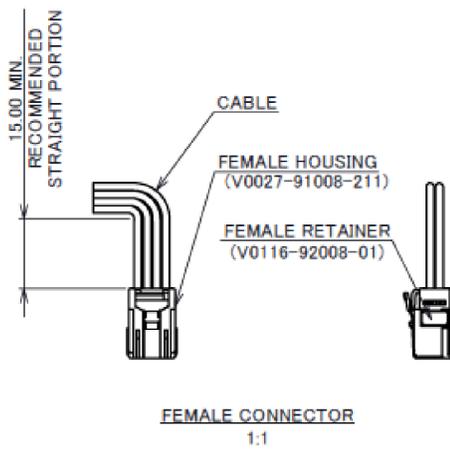
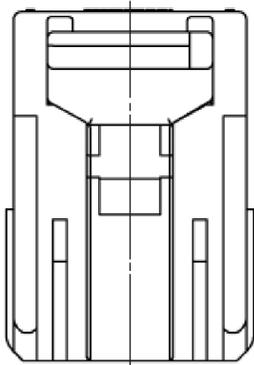


PART NO: V0019-026E-001

Rev.0

# ISH® (Vertical Type) FEMALE (8P) ※ISHV :

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0027-91008-211	NORMAL ROCK	-	BLACK	N/A



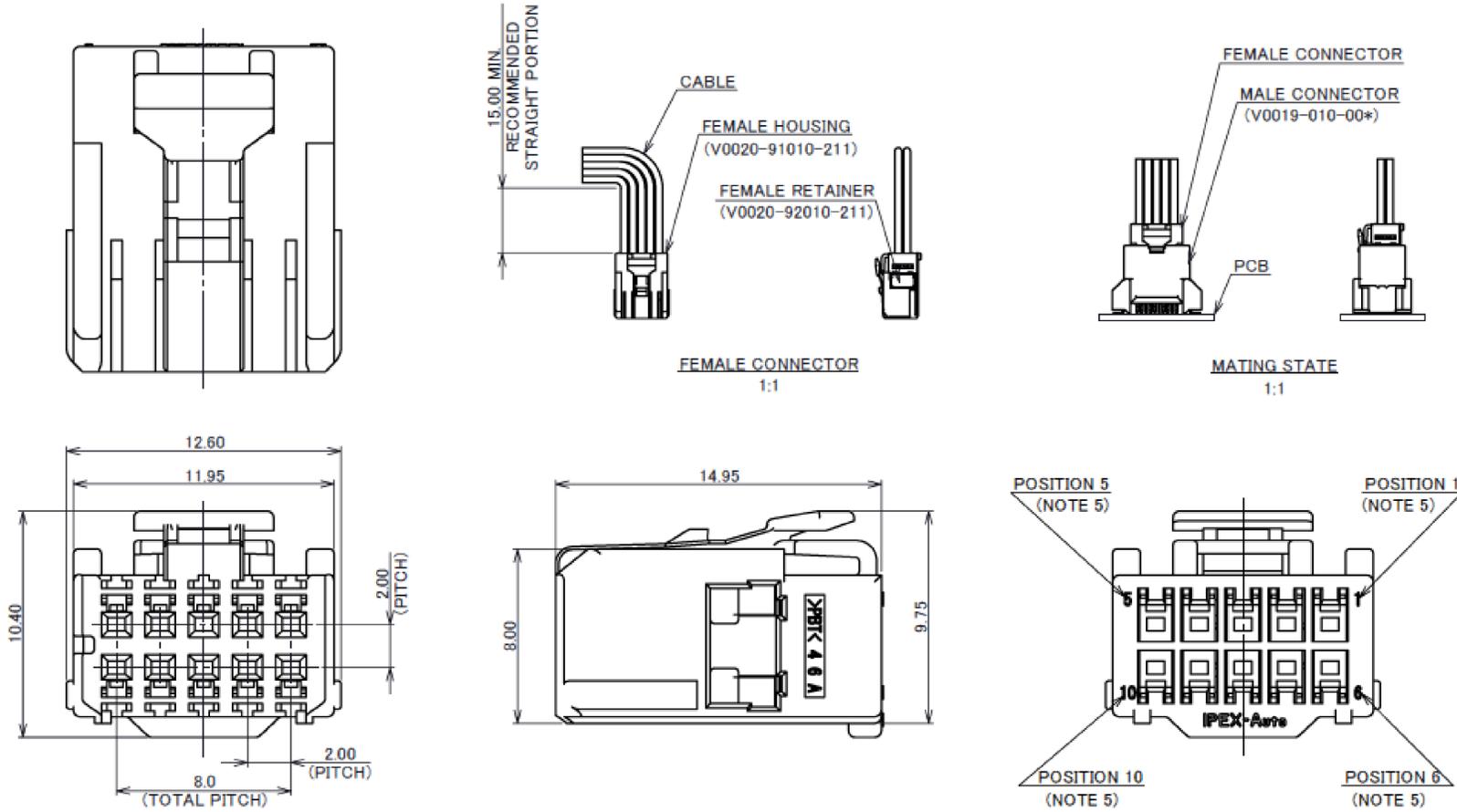
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

- NOTES
1. APPLICABLE PART NO.:
    - FEMALE TERMINAL --- VT009-02
    - FEMALE RETAINER --- V0116-92008-01
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (10P):

PART NO.	LOCK TYPE	KEY CODING	COLOR	FOR REAR COVER
V0020-91010-211	NORMAL LOCK	-	BLACK	N/A



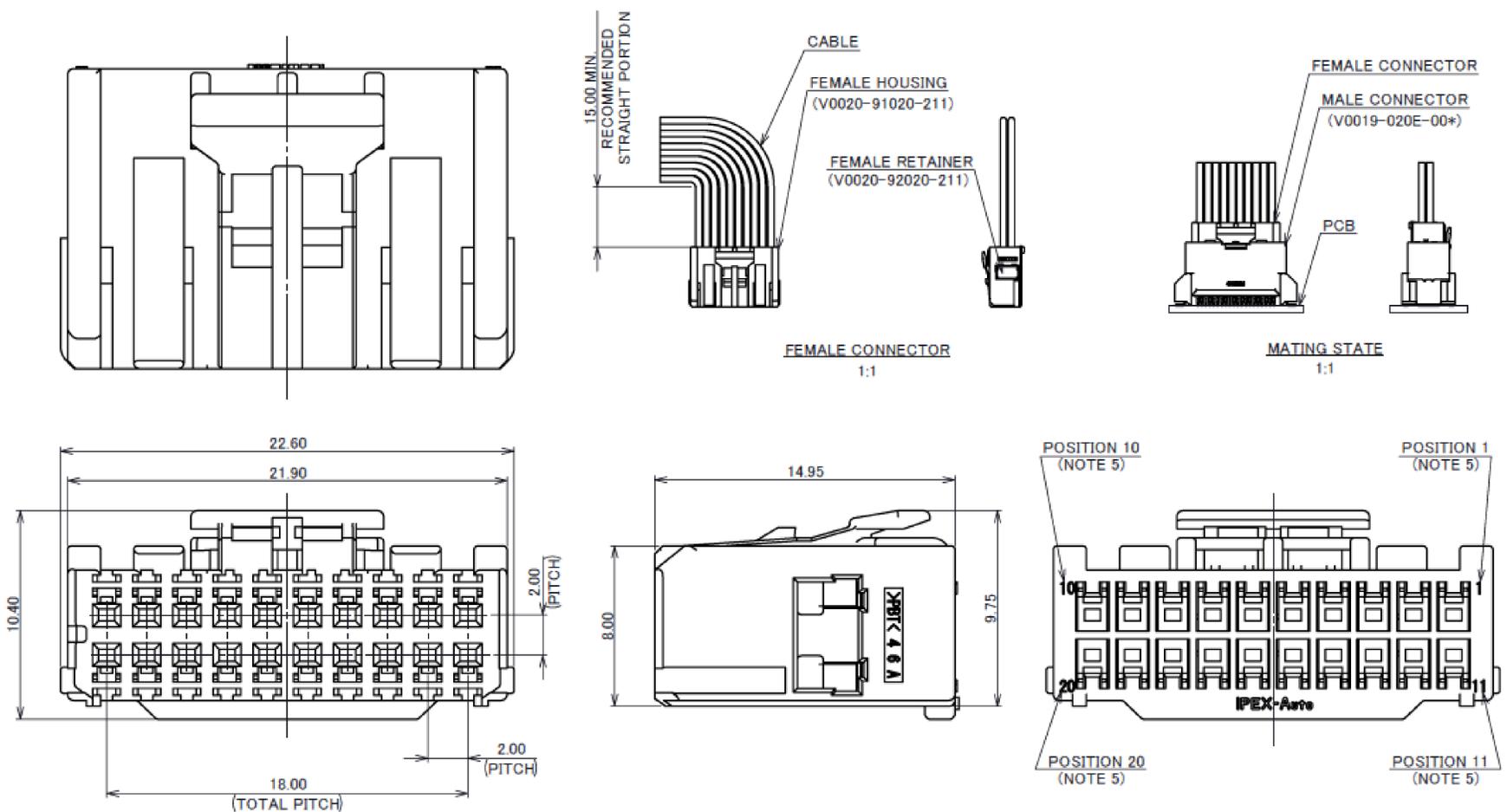
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
①	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92010-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (20P):

PART NO.
V0020-91020-211



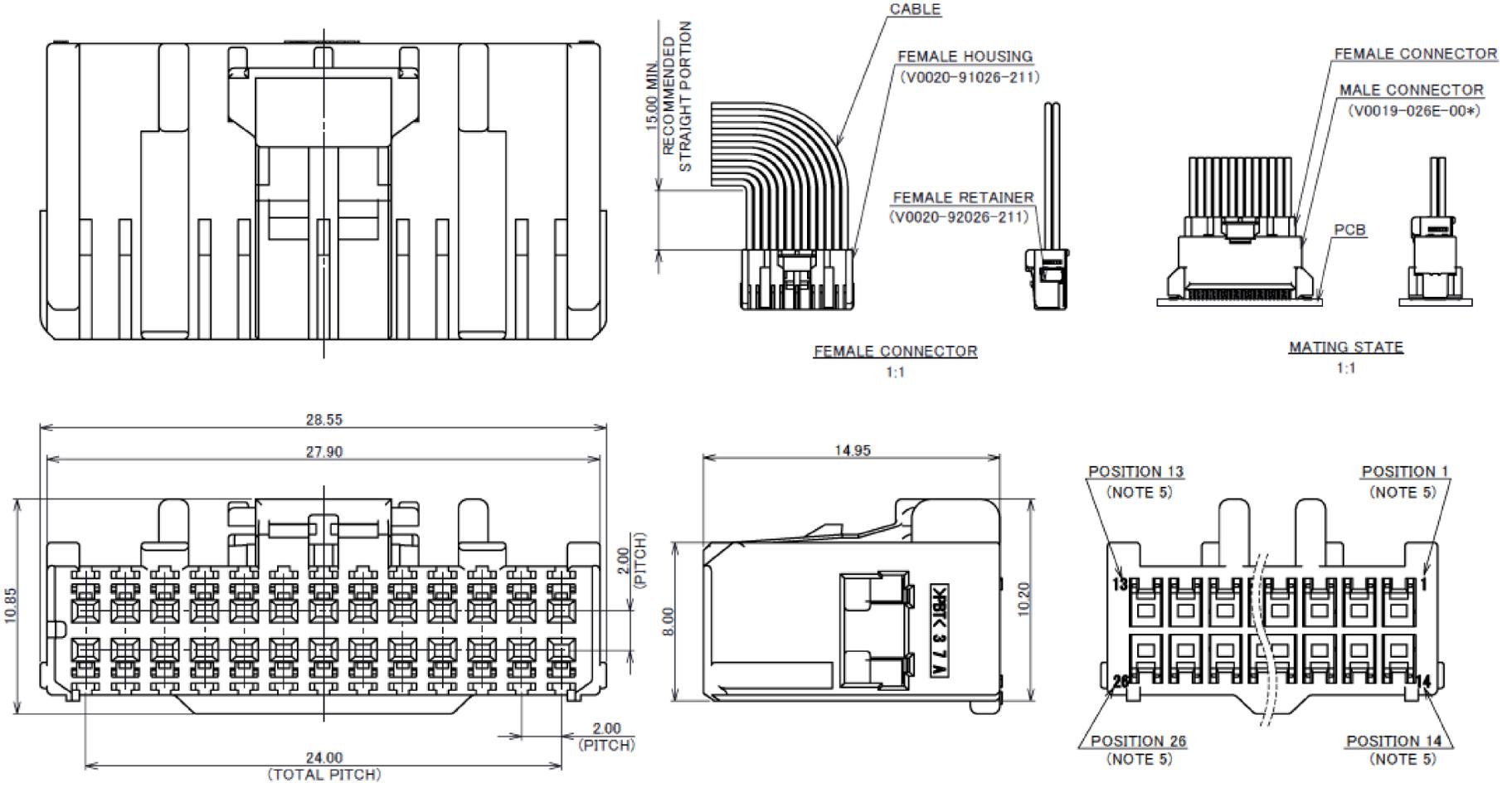
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE HOUSING	PBT	BLACK

- NOTES
- APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92020-211
  - MATERIAL: PBT
  - COMPLY WITH ELV/REHS.
  - HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  - POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE (26P):

PART NO.
V0020-91026-211



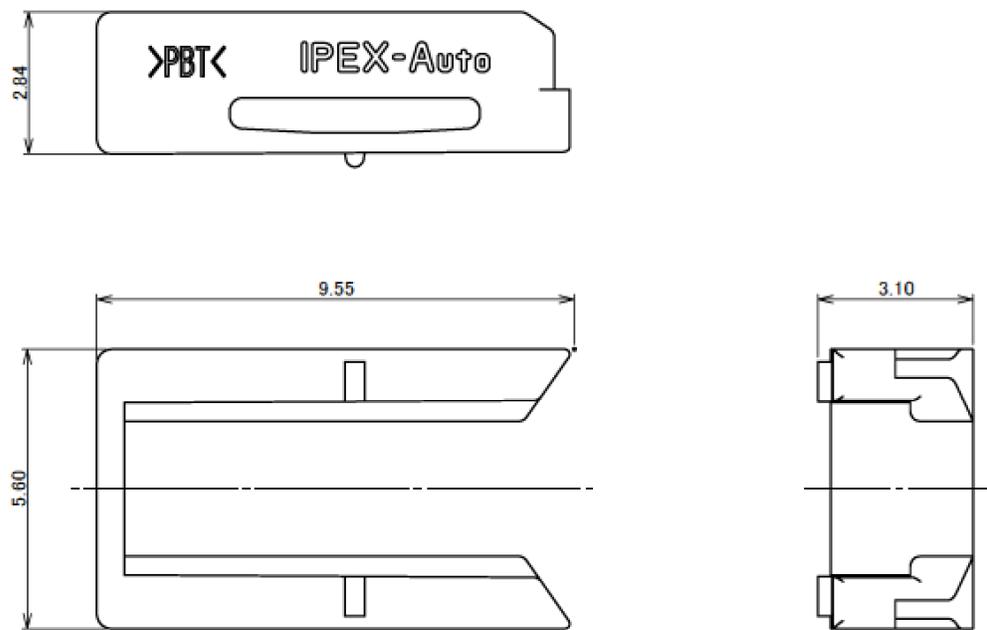
1	FEMALE HOUSING	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

- NOTES
1. APPLICABLE PART NO.:  
 - FEMALE TERMINAL --- VT009-02  
 - FEMALE RETAINER --- V0020-92026-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]
  5. POSITION NUMBERS ARE INDICATED.

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (8P) ※ISHV :

PART NO.
V0116-92008-01



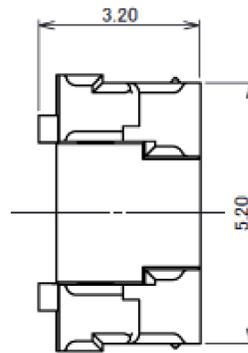
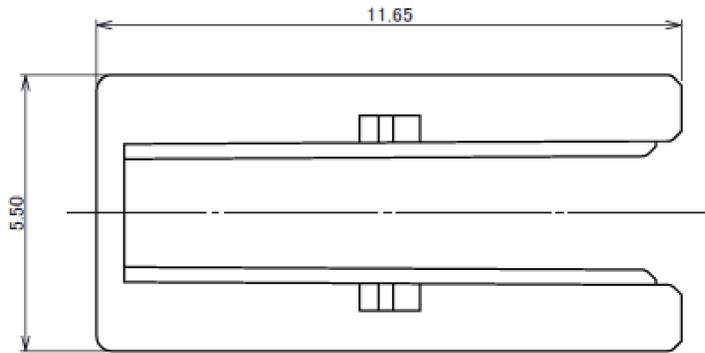
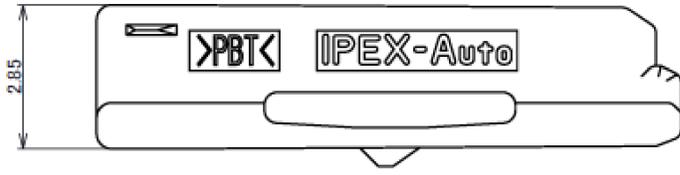
- NOTES
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 - FEMALE HOUSING --- V0116-91008-\*\*  
 V0027-91008-211
  2. MATERIAL: PBT
  3. COMPLY WITH ELV/RoHS.
  4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (10P):

PART NO.
V0020-92010-211



**NOTES**

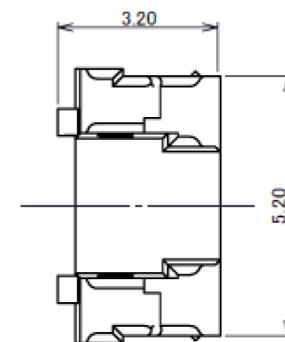
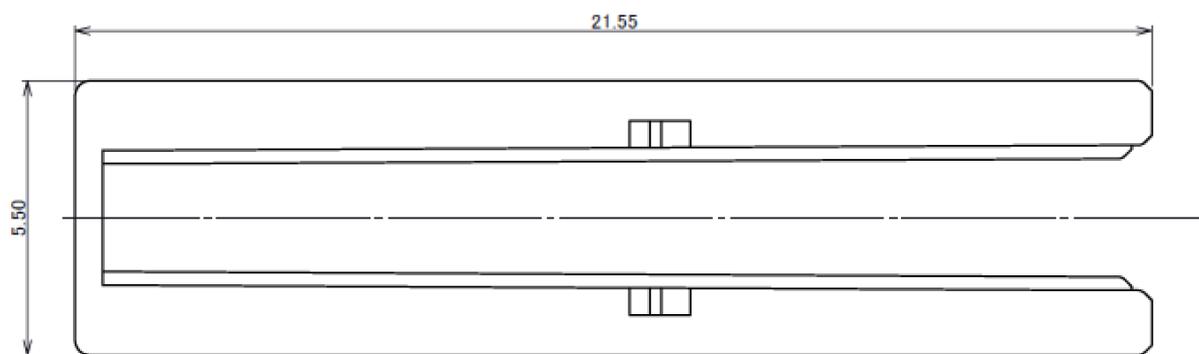
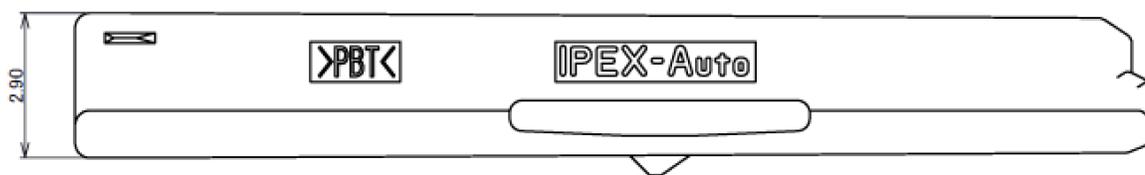
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-FEMALE HOUSING- V0020-91010-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS.
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (20P):

PART NO.
V0020-92020-211



**NOTES**

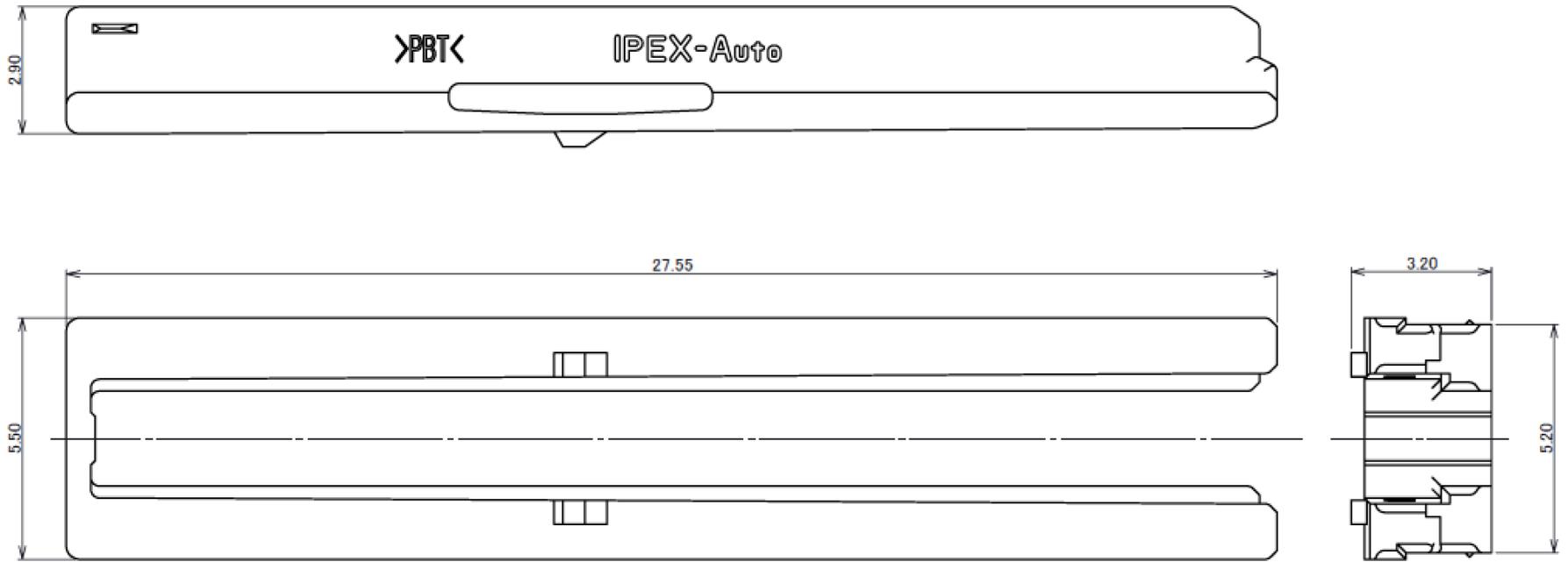
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-FEMALE HOUSING- V0020-91020-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

1	FEMALE RETAINER	PBT	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# ISH® (Vertical Type) FEMALE RETAINER (26P):

PART NO.
V0020-92026-211



## NOTES

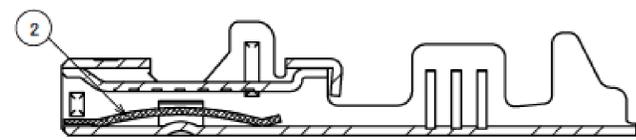
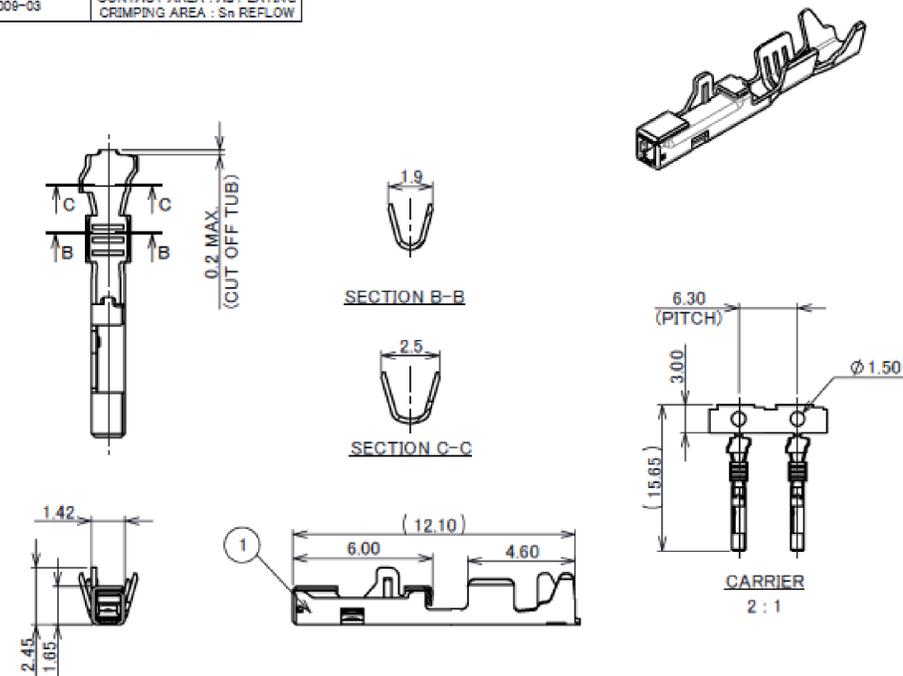
1. APPLICABLE PART NO.:  
\*FEMALE HOUSING\* V0020-91026-211
2. MATERIAL: PBT
3. COMPLY WITH ELV/RoHS
4. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0020]

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	FEMALE RETAINER	PBT	BLACK

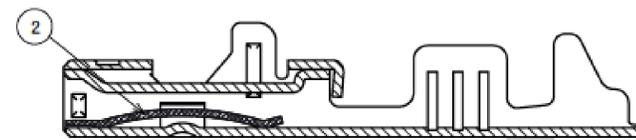
Rev.0

# ISH® (Vertical Type) TERMINAL:

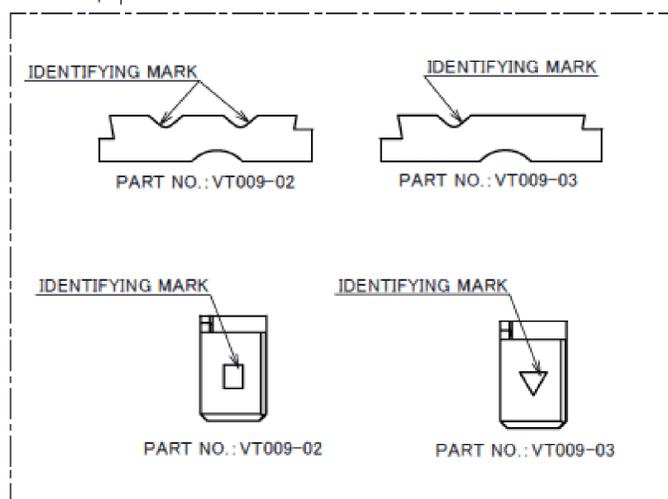
PART NO.	PLATING
VT009-02	Sn REFLOW
VT009-03	CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW



PART NO.: VT009-02



PART NO.: VT009-03  
SECTION A-A  
10 : 1



## NOTE

1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES
2. APPLICABLE CABLE SIZE: 0.3mm<sup>2</sup> / 0.5mm<sup>2</sup> (FINISHED  $\phi$  1.60mm MAX.)
3. COMPLY WITH ELV/RoHS.
4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0020].

2	SPRING	COPPER ALLOY	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING
1	BODY	BRASS	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# Custom Products Available

## RF Connector

MHF® series



## Micro-coaxial/Twinax/Discrete Wire Connector

CABLIN® series

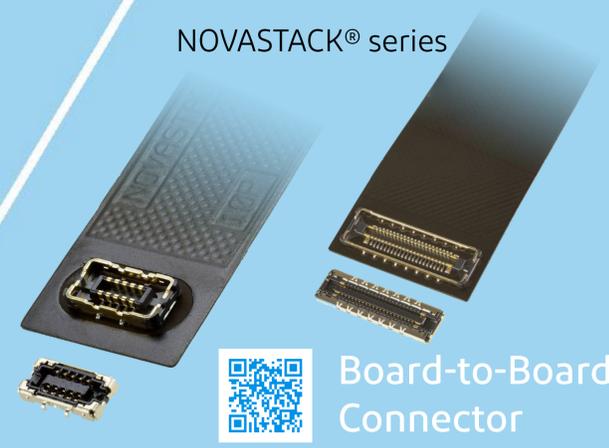


## Optical Module

LIGHTPASS® series



NOVASTACK® series



## Board-to-Board Connector



## Power Connector/Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



## FPC FFC Connector



Inquiry



MINIDOCK® series



## I/O Connector

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